

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

### REMARKS

Applicants thank the Examiner for his continued diligent review of the claims in the present case. At present, the Examiner still contends that the claims before him are not patentable as being obvious in view of various prior art references. Applicants respectfully disagree with the Examiner's position and herein traverse any and all rejections set forth in the Office Action ("OA") of 23 October 2002 (hereinafter, the "3<sup>rd</sup> OA"). In order to more fully set forth the Applicants' position, vis-à-vis the Examiner's current pending rejections, Applicants herein address such rejections by the paragraph number used by the Examiner in the present (and 3<sup>rd</sup>) OA. Applicants reserve the right to subsequently address and/or further address any bases for rejection in subsequent responses, as deemed necessary by Applicants.

After entry of the foregoing amendments, claims 1-141 remain pending in the present application. Applicants have amended the following independent claims 1, 11, 26, 32, 82, 106, 130 and 136. No new matter has been added.

### Objection to the Drawings

The Examiner has objected to the drawings because of noted informalities. Applicants will submit formal drawings when the application has received a notice of allowance.

### Response to Examiner's Rejections Under 35 U.S.C. 103(a)

The Examiner has rejected claims 1, 11, 25, 27, 28, 32-34, 44, 46, 56, 59, 65, 67-70, 73-74, 130-132, and 136-138 (hereinafter, "Claim Group A") under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,878,223 (hereinafter, "Becker") in view of U.S. Patent

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

Number, 6327,574 (hereinafter, "Kramer"). For the following reasons, Applicants respectfully traverse these rejections.

**Becker, Kramer and/or Savitzky Do Not Teach User Profiling**

In paragraph 6, the Examiner states "Becker teaches a page finder based on a user profile." (3<sup>rd</sup> OA, Page 3, ¶ 6, Line 2) Applicants respectfully note that the Examiner does not cite any passages from Becker which support the foregoing assertion. Also, Applicants note that, in the 1<sup>st</sup> OA for the present application, (*i.e.*, Paper No. 4, dated 16 January 2002) the Examiner appeared to have reached an opposite conclusion when he stated, "Becker teaches the invention in the above claims(s) [referring to Claim Group A] **except for explicitly teaching a user profile.**" (Paper No. 4, Pg. 3, ¶ 4, Line 1 (*italics in original, bold added*)). Applicants assert that the Examiner's earlier characterization is correct. That is, Becker does not teach a system that finds pages based upon a user profile.

Applicants contend that Becker teaches a system that finds pages based upon collective viewing habits and collective information, such as the demographics or "statistics of users (customers)" (Becker, Col. 10, Line 49). These statistics of "users" provide, at best, an aggregate predictive value of which page any user (and not a specific user) may desire to view next. Simple stated, Becker provides for the use of multiple user averages and does not provide for or "include[s] fields for specifying ... user profile information ..." (as set forth in the originally filed claim). The term, "user profile", as used in the present application implicitly refers to a "unique" profile including, for example, one for a unique or given user. As shown in the foregoing claim amendments, Applicants have amended the independent claims to more

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

clearly set forth this distinction, as desired. As such, for the foregoing reasons, Applicants contend Becker does not teach "user profiling" and does not read upon the pending independent claims (or those depending therefrom), both pre or post entrance of the beforementioned claim amendments.

With regards to Kramer, the Examiner has stated that Kramer teaches a "consumer profile [which] includes hierarchical attribute vectors ..." (See Examiner Remarks, Pg. 3, ¶ 6, Lines 12-13). Applicants contend that Kramer does not teach a user profile, as used in the context of the present case. More specifically, Applicants contend that in Kramer any "consumer profile" information is used only by the TIC server, under the control of the consumer's computer, and, unlike the present invention, such "consumer profile" information is not shared across the network. Applicants contend that it is implicit in the presently pending claims, prior to amendment, that the computer-readable medium includes user profile information which is shared across the network. The providing of "an identification of the machine, [and] an address of the machine" would not otherwise be necessary, if the user profile information was directly or indirectly (*i.e.*, logically) controlled only by the consumer's computer, as taught in Kramer. To more fully set forth this distinction, Applicants have amended various independent claims pending in the present case to provide that the user profile information, as expressed, for example, in an attribute value pair, may be shared. Kramer simply does not provide for the sharing of "consumer profile" or user profile information and therefore does not teach this limitation of the present claims.

CONFIDENTIAL  
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Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

Lastly, while not specifically addressed in this section of the Examiner's Remarks, the Examiner does cite U.S. Patent No. 6,012,083 (hereinafter, "Savitzky") as setting forth a user profile. (See Examiner's Remarks, pg. 4, ¶ 8) In particular, the Examiner cited the following passages from Savitzky, as providing for a user profile:

"server to transform the requests from the Web client prior to sending the requests on to the Web server, to transform the"  
(Abstract, lines 2-3);

"When a transaction is received by resolver, it is first processed by feature calculator 21. Feature calculator 21 generates the feature list for a transaction by scanning the data element (and possibly other elements) of the transaction"  
(Col. 6, Lines 37-39); and

"Although a user might access agency 10 directly, the user typically accesses agency 10 by some action taken with a Web client 12 to access a Web server 14. As explained"  
(Col. 5, Lines 1-3).

Applicants contend that none of the passages cited by the Examiner in Savitzky set forth the concept of a "user profile." Apparently, the Examiner relies upon the mention of a "feature list" as setting forth a user profile. However, even under the broadest reasonable interpretation, the term "feature list" does not relate whatsoever to a user profile. This fact is clearly established by the remainder of the above second quoted passage in Savitzky. Specifically, Savitzky refers to Table 2, wherein "Examples of transaction features are shown ..." (Col. 6, Lines 41-42).

Applicants respectfully contend that Table 2, in Savitzky, does not provide any elements which could be construed as relating to a user profile. The elements in Table 2 all relate to document characteristics, not user profiles. Further, a word search of Savitzky finds that the term "profile"

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

is not even used therein. As such, Applicants contend that neither Becker, Kramer or Savitzky provide for a user profile, as used in the context of the independent claims both prior to and post entrance of the present claim amendments.

In summary, Applicants contend that for the foregoing reasons, all of the present claims are patentable over the cited prior art references. Thus, Applicants respectfully request the Examiner to allow all presently pending claims.

**Becker Does Not Teach Using "User Profiles"**

In paragraph 6 the OA, the Examiner also asserts that "Becker teaches using profiles to determine the content to send to a user, col. 4, 5, lines 54-57, 1-4" and that these "profiles" are "user usage patterns and are a user profile." (Examiner's Remarks, Pg. 3, ¶ 6, Lines 3-5) As discussed above, Applicants respectfully disagree with the characterization that Becker teaches user profiling and specifically with the Examiner's interpretation that "user usage patterns" are "user profiles." Applicants contend that Becker teaches using prediction values, set forth in a table, to predict which page any of a plurality of users may request next, based upon the current page being viewed and/or a previous page viewed. For example, Becker provides "the table will be small and grow in size as more users use the system ... Consequently, the table becomes more useful, i.e., reflective of usage patterns, the more the systems are used to browse the web." (Becker, Col. 9, Lines 7-10 (bold added)). In short, the foregoing passage clearly sets forth the underlying premise of the Becker system; that is, by collecting page usage patterns for multiple users, a prediction can be made as to the next page any given user may desire to view. As such, the prediction table is not indicative of a single user's usage pattern and therefore

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

Becker can not be read as setting forth using user profiles for any purpose whatsoever. Becker simply does not teach user profiling.

**Becker Does not Teach A Hierarchical Attribute Value Pair Data Structure**

The Examiner has, also, relied upon Column 9, lines 1-10 in Becker as teaching a hierarchical attribute value pair data structure. Applicants contend that the "n x n" matrix table set forth in Becker is not hierarchical because, there is no ranking or subordination between any given first row with any other row. The probabilities set forth in any given row of a table, as taught by Becker, are calculated independently and do not depend upon the probabilities set forth in any other row. As such, Becker provides a tabular listing of independent probabilities. Such probabilities are not hierarchical.

In contrast, for the present invention, a donut is one example of a hierarchical attribute value pair data structure. As set forth in the specification, a donut may include a plurality of crumbs, sub-crumbs and the like (*i.e.*, a hierarchy). It is to be appreciated that the term "hierarchical" generally sets forth a "tree-like" structure. For example, The IEEE Standard Dictionary of Electrical and Electronics Terms, IEEE Std 100-1996, defines a hierarchy as, "a structure in which components are ranked into levels of subordination ..." (Pg. 485). Therefore, since Becker does not provide for the subordination or ranking of rows to other rows or probabilities to other probabilities, Becker does not set forth a hierarchical structure, as specified in the presently pending, and/or as amended herein, claims.

**Kramer Does not Set Forth a Hierarchical Attribute Value Pair Data Structure  
Wherein the Attribute Value Pair is Independent of the Hierarchical Structure**

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

The Examiner also acknowledges in the OA that "Becker teaches the invention in the above claim(s) except for explicitly teaching an independent hierarchical attribute value pair data structure." (Remarks, Pg. 3, ¶ 6, Lines 9-10) In order to cover the concept set forth in the present claims of providing a hierarchical ... structure wherein the attribute value pair is independent of the hierarchical structure, the Examiner relies upon Kramer. As discussed above, in Kramer, each user's profile information is stored such that only the user may control such information. As such, every data fact used to generate vectors or otherwise decide which content to provide to a given user, at any given time, is specific to each user. Or, stated differently, in Kramer, a given user's data is not shared with other users, instead "[Kramer] includes a novel method for storing and using information about **individual consumers** as derived from the transactional behavior of the consumer." (Kramer, Col. 21, Lines 63-65). For example, Applicants assert that, using Kramer, every citizen of Denver, Colorado would have a separate and distinct data entry in each of their own associated database(s) setting forth, for example, that their "city = Denver" and their "state = Colorado". Applicants contend that Kramer does not provide or teach an embodiment wherein a given data record or fact (e.g., the users all reside in the same city) may be shared, used or associated with for a plurality of users. Instead, Kramer addresses user privacy concerns by providing each and every user with a separate data record which is stored in a database accessible/controllable only via the user's computer. In essence, using Kramer a given attribute data pair (e.g., city = Denver) is not hierarchically independent.

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

Therefore, Kramer does not provide a data structure "wherein the attribute value pair is independent of the hierarchical structure."

In summary, each of the independent claims provide for a "hierarchical attribute value pair data structure comprising a data structure wherein the attribute value pair is independent of the hierarchical structure." Applicants contend that neither Becker (as expressly admitted by the Examiner) or Kramer provide such a data structure

**Becker in view of Savitzky Does Not Render Obvious Any of the Independent Claims**

In paragraph 8 of the present OA, the Examiner has also rejected all of the pending claims as being unpatentable over Becker in view of Savitzky. Applicants respectfully traverse these rejections. As discussed previously above with respect to the Becker in view of Kramer rejections, the Examiner has stated that "Becker teaches a page finder based on a user profile.... Becker teaches using profiles to determine the content to send to a user ... Becker teaches a hierarchical attribute value pair data structure ... [and that] Becker teaches the invention ... except for explicitly teaching a user-profile." (Examiner's Remarks, Pg. 4, ¶ 8, Lines 2-10). For the reasons expressed hereinabove, Applicants respectfully disagree with the Examiner's characterization of Becker.

In essence, the Examiner has repeated his earlier rejections that Savitzky teaches user profiling. As discussed hereinabove, Applicants contend that Savitzky does not teach or suggest



Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

user profiling. Thus, at a minimum this element of the pending independent claims is not taught by the combination of Becker with Savitzky.

Further, as discussed in the Applicants' response to the last Office Action, Applicants repeat their objection that Becker in view of Savitzky does not teach each and every element of the pending claims. Again, the Examiner, in paragraph 8 of the presently outstanding OA has not set forth where either the Becker reference or the Savitzky reference teach or suggest a "hierarchical attribute value pair data structure ... wherein the attribute value pair is independent of the hierarchical structure."

As mentioned in Applicants previous response, under MPEP § 2143, in order to comply with the basic requirements of a *prima facie* case of obviousness, the Examiner must establish that (1) there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings, (2) there must be a reasonable expectation of success, and (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations.

In the purpose of brevity, Applicants incorporate herein those arguments previously set forth in response to the earlier Office Actions vis-à-vis the Examiner's obviousness rejection of Becker in view of Savitzky. Such arguments clearly assert that Becker in view of Savitzky do not teach a hierarchical attribute value pair data structure wherein the attribute value pair is independent of the hierarchy. As such, Applicants respectfully request the Examiner to withdraw all rejections of the pending claims based upon Becker in view of Savitzky.

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

**Dependent Claims All Depend From Patentable Independent Claims**

Since each dependent claim depends from a patentable independent claims, as set forth hereinabove, Applicants also traverse the Examiner's rejections of various dependent claims in paragraphs 9 -14 of the Remarks section for the currently outstanding OA. Applicants reserve the right to pursue further arguments, as desired, at a later time challenging each and/or any of the rejections of the various dependent claims pending in the present application.

**Applicant's Response to Examiner's "Response to Amendment"**

Applicants now draw the Examiner's attention to paragraph 15 of his Remarks, which provides as follows "[t]he broad claim language used is interpreted on its face and based on this interpretation the claims have been rejected." In response to this assertion of non-patentability, based upon the claims being "broad", Applicants direct the Examiner's attention, to 35 U.S.C. 103(a), which provides in relevant part:

A patent may not be obtained ... if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. (emphasis added)

Applicants note that nowhere in 35 U.S.C. 103(a), or elsewhere in the U.S. Patent Laws, is there a standard of patentability which specifies "broad" claims as being unpatentable; which is arguably the standard the Examiner is applying in paragraph 15 of his Remarks in rejecting the pending claims. Applicants respectfully request the Examiner to apply the U.S. Patent Laws as they are written. Such laws and regulations irrefutably require Examiners to view the whole or entirety of each claim when determining patentability. Applicants contend that application of

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

these well established legal principles must lead one to the conclusion that the claims currently pending are patentable because no cited references alone or in combination thereof teach the whole subject matter set forth in each of the currently pending claims. Further, Applicants contend that the presently requested claim amendments require one to reasonably reach the same conclusion, *i.e.*, that the claimed subject matter is patentable in view of the prior art of record.

Further, the Examiner in paragraph 15 states ""the hierarchical attribute value pair data structure" as defined is still very broad and open to interpretation such as a hierarchy of data with data points related or connected to one or another (paired) based on some relationship." Again, Applicants respectfully request the Examiner to view the whole claim, the remainder of which specifically teaches an interpretation different than that set forth in paragraph 15 by the Examiner.

With regards to paragraph 16 of the Examiner's Remarks, Applicants again respectfully disagree with the Examiner's position. As stated above, Applicants contend the cited references do not teach each and every claim limitation. Since a specific showing to the contrary, of how Becker with Kramer or Becker with Savitzky teach the whole of each independent claim, has not been made by the Examiner, Applicants contend that the Examiner has not set forth a *prima facie* case of obviousness.

In paragraph 17, the Examiner states "Obviously the data is independent of the hierarchical structure ..." This is mere conjecture by the Examiner. Again, Applicants contend that there is no portion of Becker, Kramer, or Savitzky which the Examiner has cited which specifies, explicitly or implicitly, that the data referred to such references is independent of the

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

hierarchy. The mere fact that "additional features can be added at any time to the features calculator's known features" (as quoted by the Examiner, Savitzky, Col. 6, Lines 53-54) does not provide that such "additional features" are independent. It merely provides that additional features can be added. Further, as discussed above, Applicants contend that the cited references, alone or in combination, teach away from attribute value data pairs which are independent of a given hierarchical structure.

With regards to paragraph 18, the Examiner again, in a nut-shell, states that Becker teaches user profiling. As stated above, Applicants contend that Becker does not teach user profiling and that usage patterns for a Web page simply do not equate to user profiles.

With regards to paragraph 19, the Examiner states that "Becker teaches a TV and its related communication requirements". Applicants agree, Becker teaches use of a TV. However, Applicants do not agree that Becker teaches "specifying the address of a personal computer, a television, a cable box, a satellite box, video game console, or a personal digital assistant", as set forth in dependent claim 25. Becker merely provides for televisions used to receive pages that may include links. Becker does not provide that an address exists for a television or that "a type of content" may be specified based, in part, upon the address for a TV. As such, Applicants respectfully contend Becker does not teach this limitation.

### CONCLUSION

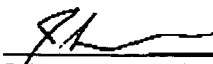
In view of the preceding remarks, Applicants respectfully request the Examiner to enter the foregoing amendments to the claims, rescind his obviousness rejections and allow all pending

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

claims. If any points remain at issue, which the Examiner feels could best be resolved by telephone interview, he is urged to contact the attorney below.

Dated this 24th day of March, 2003.

Respectfully submitted,

  
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Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

1. (Twice Amended) An article of manufacture for compiling and maintaining information for use in routing and transmitting content to a machine via a network, comprising:  
a computer-readable medium including information for use in transmitting content to a machine;

wherein the medium includes fields for specifying an identification of the machine, an address of the machine, and user-profile information for a unique user, for use in determining a type of content to transmit to the machine, the user-profile information being specified in an hierarchical attribute value pair data structure, the hierarchical attribute value pair data structure further comprising a data structure wherein at least one [the] attribute value pair is independent of the hierarchical structure and is adapted for being shared with at least one second machine.

11. (Twice Amended) A method for compiling and maintaining information for use in routing and transmitting content to a machine via a network by specifying particular fields within a computer-readable medium, comprising:

receiving information for use in generating a user profile for a unique user;

specifying in the medium, using the information, an identification of a machine, an address of the machine, and user-profile information for use in determining a type of content to transmit to the machine; and

storing the user-profile information in an hierarchical attribute value pair data structure, the hierarchical attribute value pair data structure further comprising a data structure wherein at

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

least one [the] attribute value pair is independent of the hierarchical structure and is adapted for being shared with at least one second machine.

26. (Twice Amended) A method of accessing information for use in routing and transmitting content to a machine via a network, comprising:

establishing a network connection from a machine;

accessing via the network connection an hierarchical attribute value pair data structure stored in a computer-readable medium, the hierarchical attribute value pair data structure further comprising a data structure wherein at least one [the] attribute value pair is independent of the hierarchical structure and is adapted for being shared with at least one second machine; and

transmitting information via the network connection for specifying in the data structure an identification of the machine, an address of the machine, and user-profile information for a unique user, for use in determining a type of content to transmit to the machine.

32. (Twice Amended) An apparatus for accessing information for use in routing and transmitting content to a machine via a network, comprising:

a network module for establishing a network connection from a machine;

an access module for accessing via the network connection an hierarchical attribute value pair data structure stored in a computer-readable medium, the hierarchical attribute value pair data structure further comprising a data structure wherein at least one [the] attribute value pair is independent of the hierarchical structure and is adapted for being shared with at least one second machine; and

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

a transmit module for transmitting information via the network connection for specifying in the data structure an identification of the machine, an address of the machine, and user-profile information for a unique user, for use in determining a type of content to transmit to the machine.

82. (Twice Amended) An apparatus for compiling and maintaining information for use in routing and transmitting content to a machine via a network:

a means for receiving information for use in generating a user profile for a unique user;

a means for specifying in the medium, based on the information received, a machine, an address associated with the machine, and user-profile information for use in determining a type of content to transmit to the machine; and

a means for storing the user-profile information in an hierarchical attribute value pair data structure, the hierarchical attribute value pair data structure further comprising a data structure wherein the attribute value pair is independent of the hierarchical structure.

106. (Twice Amended) A computer-readable medium containing programming instructions for controlling a computer system which routes and transmits content to a machine via a network, by:

receiving information for use in generating a user profile;

specifying, using the information, an identification of a machine, an address of the machine, and user-profile information for use in determining a type of content to transmit to the machine; and



Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

storing the user-profile information in an hierarchical attribute value pair data structure, the hierarchical attribute value pair data structure further comprising a data structure wherein at least one [the] attribute value pair is independent of the hierarchical structure and is adapted for being shared with at least one second machine.

130. (Twice Amended) A computer-readable medium containing programming instructions which control a computer system, the computer system being used to route and transmit content to a machine via a network, by:

establishing a network connection to a machine;

accessing via the network, a hierarchical attribute value pair data structure, the hierarchical attribute value pair data structure further comprising a data structure wherein at least one [the] attribute value pair is independent of the hierarchical structure and is adaptable for sharing with at least one second machine; and

transmitting information, via the network connection, which specifies an identification of the machine in the data structure, an address of the machine, and unique user-profile information for use in determining a type of content to transmit to the machine.

136. (Twice Amended) An apparatus for accessing information for use in routing and transmitting content to a machine via a network, comprising:

a means for establishing a network connection to a machine;

a means for accessing, via the network connection, a hierarchical attribute value pair data structure stored in a computer-readable medium, the hierarchical attribute value pair data

Serial No. 09/409,305  
Attorney Docket No. 4967.00  
Via Facsimile (703) 746-7239

structure further comprising a data structure wherein the attribute value pair is independent of the hierarchical structure; and

a means for transmitting information via the network, wherein the information is specified in the data structure and includes an address of the machine and unique user-profile information; wherein the user-profile information is used to determine a type of content to transmit to the machine and is shared with at least one second machine.